```
REPORT  ZINTERNALTABLE1.

* DATA IT_KNA1 TYPE TABLE OF KNA1.  " --> IT WILL WORKS FOR ALL COLUMNS .....

TYPES:BEGIN OF ZSTR_KNA1,

KUNNR TYPE KUNNR,
LAND1   TYPE LAND1_GP,
NAME1  TYPE NAME1_GP,
NAME2 TYPE    NAME2_GP,
ORT01  TYPE ORT01_GP,

END OF ZSTR_KNA1.

" TYPES IS USED TO DEFINE THE USER DEFINED STRUCTURE TYPES.....

DATA IT_KNA1 TYPE TABLE OF ZSTR_KNA1.

SELECT  KUNNR LAND1 NAME1 NAME2 ORT01 FROM KNA1
 INTO TABLE IT_KNA1
  WHERE LAND1 = 'DE'.
SORT IT_KNA1 DESCENDING BY KUNNR.

CALL FUNCTION 'GUI_DOWNLOAD'
  EXPORTING
    FILENAME                  = 'D:\MY DATA\DATA.TXT'

  TABLES
    DATA_TAB                  = IT_KNA1

        .

WRITE 'SAVED SUCCESSFULLY .
```

```
REPORT  ZINTERNALTABLE2.

* DATA IT_KNA1 TYPE TABLE OF KNA1.  " --> IT WILL WORKS FOR ALL COLUMNS .....

PARAMETERS p_cntry TYPE LAND1_GP.


TYPES:BEGIN OF ty_KNA1,

KUNNR TYPE KUNNR,
LAND1   TYPE LAND1_GP,
NAME1  TYPE NAME1_GP,
NAME2 TYPE   NAME2_GP,
ORT01  TYPE ORT01_GP,

END OF ty_KNA1.

" TYPES IS USED TO DEFINE THE USER DEFINED STRUCTURE TYPES.....

DATA : IT_KNA1 TYPE TABLE OF ty_KNA1,
      wa_kna1 type ty_kna1.


SELECT  KUNNR LAND1 NAME1 NAME2 ORT01 FROM KNA1
 INTO TABLE IT_KNA1
  WHERE LAND1 = p_cntry.
SORT IT_KNA1 DESCENDING BY KUNNR.
```

```
CALL FUNCTION 'GUI_DOWNLOAD'
 EXPORTING
  FILENAME  = 'D:\MY DATA\DATA.TXT'

 TABLES
  DATA_TAB  = IT_KNA1

       .

WRITE 'SAVED SUCCESSFULLY .........'.
uline.
WRITE /.
WRITE /.


LOOP AT it_kna1 INTO wa_kna1 from 10 TO 20.
 WRITE / WA_KNA1.
ENDLOOP.
```

```
REPORT  ZINTERNALTABLE3 LINE-SIZE 150.

* DATA IT_KNA1 TYPE TABLE OF KNA1.  " --> IT WILL WORKS
FOR ALL COLUMNS .......

PARAMETERS p_cntry TYPE LAND1_GP.

PARAMETERS : CB_FILE AS CHECKBOX DEFAULT 'X',
          CB_DISP AS CHECKBOX .

TYPES:BEGIN OF ty_KNA1,

KUNNR TYPE KUNNR,
LAND1   TYPE LAND1_GP,
NAME1  TYPE NAME1_GP,
```

```
NAME2 TYPE   NAME2_GP,
ORT01  TYPE ORT01_GP,

END OF ty_KNA1.

" TYPES IS USED TO DEFINE THE USER DEFINED STRUCTURE TYPES.....

DATA : IT_KNA1 TYPE TABLE OF ty_KNA1,
      wa_kna1 type ty_kna1.

SELECT  KUNNR LAND1 NAME1 NAME2 ORT01 FROM KNA1
 INTO TABLE IT_KNA1
  WHERE LAND1 = p_cntry.
SORT IT_KNA1 DESCENDING BY KUNNR.

IF CB_FILE = 'X'.

CALL FUNCTION 'GUI_DOWNLOAD'
  EXPORTING
    FILENAME  = 'D:\MY DATA\DATA.TXT'

  TABLES
    DATA_TAB  = IT_KNA1.

WRITE 'SAVED SUCCESSFULLY .........'.
ENDIF.
uline.
WRITE /.


IF CB_DISP = 'X'.

 LOOP AT it_kna1 INTO wa_kna1 .
  WRITE / WA_KNA1.
 ENDLOOP.
```

```
* LOOP AT it_kna1 INTO wa_kna1 From 10 TO 20.
*  WRITE :/ SY-TABIX, WA_KNA1-KUNNR COLOR 1, WA_KNA1-
NAME1 COLOR 5, wa_kna1-name2 COLOR 7.
* ENDLOOP.

ENDIF.
```

```
REPORT  ZINTERNALTABLE4.

PARAMETERS p_id type ZEMP_ID.

TYPES : BEGIN OF TY_EMP,
      NAME TYPE  ZNAME30,
      AGE TYPE  ZAGE10,
      EMAIL TYPE  ZEMAIL30,
      ADDRESS TYPE  ZADDRESS30,
  END OF TY_EMP.

DATA : IT_EMP TYPE TABLE OF TY_EMP,
      WA_EMP TYPE TY_EMP.


SELECT NAME AGE EMAIL ADDRESS FROM ZEMPLOYEES
      INTO TABLE IT_EMP WHERE EMP_ID = P_ID.


 LOOP AT IT_EMP INTO WA_EMP.
 WRITE :/ SY-TABIX , WA_EMP-NAME COLOR 1   , WA_EMP-AGE COLO
R 2, WA_EMP-EMAIL COLOR 3 , WA_EMP-ADDRESS COLOR 4.
 ENDLOOP.
```

```
REPORT  ZINTERNALTABLE5.

"PARAMETERS p_SAL type ZSAL.

TYPES : BEGIN OF TY_EMP,
      EMP_ID TYPE ZEMP_ID,
      NAME TYPE  ZNAME30,
      AGE TYPE  ZAGE10,
      EMAIL TYPE  ZEMAIL30,
      ADDRESS TYPE  ZADDRESS30,
      SALARY TYPE ZSAL,
  END OF TY_EMP.

DATA : IT_EMP TYPE TABLE OF TY_EMP,
      WA_EMP TYPE TY_EMP.


SELECT EMP_ID NAME AGE EMAIL ADDRESS SALARY FROM YEMPLOY
EES
      INTO TABLE IT_EMP." WHERE SALARY > P_SAL.
  SORT IT_EMP DESCENDING BY EMP_ID.

PERFORM DISPLAY_DATA.

CLEAR WA_EMP.

WA_EMP-EMP_ID = 109.
WA_EMP-NAME = 'JAYA'.
WA_EMP-AGE = 22.
WA_EMP-EMAIL = 'JAYA@GMAIL.COM'.
WA_EMP-ADDRESS = '12/3 SMSN ASS,'.
WA_EMP-SALARY = 12000.

APPEND WA_EMP TO IT_EMP.
```

```
CLEAR wa_emp.

WA_EMP-EMP_ID = 110.
WA_EMP-NAME = 'JAINI'.
WA_EMP-AGE = 22.
WA_EMP-EMAIL = 'JAINI@GMAIL.COM'.
WA_EMP-ADDRESS = '112 IDSFMSN ASS,'.
WA_EMP-SALARY = 15000.

INSERT WA_EMP INTO IT_EMP INDEX 5.

APPEND LINES OF IT_EMP TO IT_EMP.
SORT  IT_EMP DESCENDING BY EMP_ID.
WRITE / 'AFTER APPENDING .........'.
PERFORM DISPLAY_DATA.

DELETE ADJACENT DUPLICATES FROM IT_EMP COMPARING AL
L FIELDS.
WRITE / 'AFTER DELETING'.
PERFORM DISPLAY_DATA.

READ TABLE IT_EMP INTO WA_EMP INDEX 10.
WRITE / 'AFTER READING'.

WRITE :/20 wa_emp-NAME COLOR 1.

*data v_line type i.
*
*v_line = v_line < IT_EMP > .
*
*write :/ 'no of records ......' , v_line COLOR 5.

clear wa_emp.
```

```
READ TABLE it_emp INTO wa_emp WITH KEY AGE = 25 BINARY S
EARCH.
write :/ 'name is ', wa_emp-name COLOR 2 LEFT-JUSTIFIED.

FORM DISPLAY_DATA.

  write:/10 sy-uline(117).
  WRITE :/10 SY-VLINE, (5) 'INDEX' COLOR COL_HEADING , SY-
VLINE, (10) 'EMPLOYEE_ID' COLOR COL_HEADING, SY-VLINE, (10) 'N
AME' COLOR COL_HEADING  , SY-VLINE, (10) 'AGE' COLOR COL_HE
ADING , SY-VLINE, (25) 'EMAIL' COLOR COL_HEADING , SY-VLINE, (25
)
'ADDRESS' COLOR COL_HEADING , SY-VLINE, (10) 'SALARY' COLO
R col_heading, SY-VLINE.


 LOOP AT IT_EMP INTO WA_EMP.
   write:/10 sy-uline(117).
 WRITE :/10 SY-VLINE, (5) SY-TABIX , SY-VLINE, (10) WA_EMP-EMP_ID
COLOR 6, SY-VLINE, (10) WA_EMP-NAME COLOR 1  , SY-VLINE, (10)
WA_EMP-AGE COLOR 2 , SY-VLINE, (25) WA_EMP-EMAIL COLOR 3 , S
Y-VLINE, (25) WA_EMP-ADDRESS COLOR 4 , SY-VLINE,
 (10) WA_EMP-SALARY COLOR 7 , SY-VLINE.
 ENDLOOP.
 write:/10 sy-uline(117).
ENDFORM.
```

```
REPORT  ZINTERNALTABLE6.

PARAMETERS p_SAL type ZSAL.

TYPES : BEGIN OF TY_EMP,
      EMP_ID TYPE ZEMP_ID,
      NAME TYPE  ZNAME30,
```

```
      AGE TYPE  ZAGE10,
      EMAIL TYPE  ZEMAIL30,
      ADDRESS TYPE  ZADDRESS30,
      SALARY TYPE ZSAL,
  END OF TY_EMP.

DATA : "IT_EMP TYPE sorted table of TY_EMP WITH UNIQUE k
ey emp_id,
      "IT_EMP TYPE sorted table of TY_EMP WITH non-unique k
ey age,
      IT_EMP TYPE hashed table of TY_EMP WITH UNIQUE key emp
_id,

      WA_EMP TYPE TY_EMP.


SELECT EMP_ID NAME AGE EMAIL ADDRESS SALARY FROM YEMPLOY
EES
      INTO table IT_EMP WHERE SALARY > P_SAL.

PERFORM DISPLAY_DATA.


FORM DISPLAY_DATA.

  write:/10 sy-uline(117).
  WRITE :/10 SY-VLINE, (5) 'INDEX' COLOR COL_HEADING , SY-
VLINE, (10) 'EMPLOYEE_ID' COLOR COL_HEADING, SY-VLINE, (10) 'N
AME' COLOR COL_HEADING  , SY-VLINE, (10) 'AGE' COLOR COL_HE
ADING , SY-VLINE, (25) 'EMAIL' COLOR COL_HEADING , SY-VLINE, (25
)
'ADDRESS' COLOR COL_HEADING , SY-VLINE, (10) 'SALARY' COLO
R col_heading, SY-VLINE.


 LOOP AT IT_EMP INTO WA_EMP.
```

```
   write:/10 sy-uline(117).
 WRITE :/10 SY-VLINE, (5) SY-TABIX , SY-VLINE, (10) WA_EMP-EMP_ID
COLOR 6, SY-VLINE, (10) WA_EMP-NAME COLOR 1  , SY-VLINE, (10)
WA_EMP-AGE COLOR 2 , SY-VLINE, (25) WA_EMP-EMAIL COLOR 3 , S
Y-VLINE, (25) WA_EMP-ADDRESS COLOR 4 , SY-VLINE,
 (10) WA_EMP-SALARY COLOR 7 , SY-VLINE.
 ENDLOOP.
 write:/10 sy-uline(117).
ENDFORM.
```

```
REPORT  ZINTERNALTABLE_OLD4.

PARAMETERS p_id type ZEMP_ID.

TYPES : BEGIN OF TY_EMP,
      NAME TYPE  ZNAME30,
      AGE TYPE  ZAGE10,
      EMAIL TYPE  ZEMAIL30,
      ADDRESS TYPE  ZADDRESS30,
  END OF TY_EMP.

**********************
* WITH HEADER LINE
**********************

*****DATA : IT_EMP TYPE standard table of TY_EMP WITH HE
ADER LINE.
*****
*****
```

```
*****SELECT NAME AGE EMAIL ADDRESS FROM yEMPLOYEES
*****       INTO TABLE IT_EMP ." WHERE EMP_ID = P_ID.
*****
***** LOOP AT IT_EMP.
*****  IF it_emp[] is initial.
*****    write :/ ' no data found '.
*****    else.
*****WRITE :/ SY-TABIX , it_emp-NAME COLOR 1  ,
*****it_emp-AGE COLOR 2, it_EMP-EMAIL COLOR 3 , it_EMP-
ADDRESS COLOR 4.
*****  ENDIF.
*****
***** ENDLOOP.


***************
* OCCURS
***************

DATA :  " IT_EMP TYPE TY_EMP OCCURS 100 , "NOT RECOMM
ENDED .....

      " IT_EMP TYPE  TABLE OF TY_EMP INITIAL SIZE 100 , " RE
COMMENDED. ,....

      """""""OCCURS 0 *****

      IT_EMP TYPE TY_EMP OCCURS 0,

      WA_EMP TYPE TY_EMP.

SELECT NAME AGE EMAIL ADDRESS FROM yEMPLOYEES
INTO TABLE IT_EMP ." WHERE EMP_ID = P_ID.

LOOP AT IT_EMP INTO WA_EMP.
IF it_emp is initial.
```

```
write :/ ' no data found '.
else.
WRITE :/ SY-TABIX , WA_EMP-NAME COLOR 1 .
ENDIF.

ENDLOOP.
```

Example of Itab using all keywords

```
REPORT  ZDEMO_INTERNAL_TABLE_EXAMPLE6 no standard page
heading line-size 200.

**** Structure DATA Type ******

types : begin of ty_zemp,
        EMP_ID type  ZEMP_ID,
        NAME type  ZNAME1,
        AGE type  ZAGE,
        SALARY TYPE ZSALARY1,
        EMAIL type ZEMAIL,
        end of ty_zemp.

data it_ty_zemp type standard table of ty_zemp.

data wa_ty_zemp type ty_zemp.

DATA V_LINES TYPE I VALUE 0.

select emp_id name age salary email from zemployee into
 table it_ty_zemp.
sort it_ty_zemp descending by name.
```

```
*sort it_ty_zemp by name descending AGE ASCENDING .


perform disp_emp.

CLEAR WA_TY_ZEMP.

WA_TY_ZEMP-EMP_ID = 109.
WA_TY_ZEMP-NAME = 'JAYA'.
WA_TY_ZEMP-AGE = 22.
WA_TY_ZEMP-SALARY = 12000.
WA_TY_ZEMP-EMAIL = 'JAYA@GMAIL.COM'.

APPEND WA_TY_ZEMP TO IT_TY_ZEMP.

CLEAR WA_TY_ZEMP.

WA_TY_ZEMP-EMP_ID = 110.
WA_TY_ZEMP-NAME = 'JAINI'.
WA_TY_ZEMP-AGE = 22.
WA_TY_ZEMP-EMAIL = 'JAINI@GMAIL.COM'.
WA_TY_ZEMP-SALARY = 15000.

INSERT WA_TY_ZEMP INTO it_TY_ZEMP INDEX 4.

*APPEND WA_TY_ZEMP TO IT_TY_ZEMP.

APPEND LINES OF it_TY_ZEMP TO it_TY_ZEMP.
*APPEND LINES OF it_TY_ZEMP FROM 2 TO 3 TO it_TY_ZEMP .

SORT  it_TY_ZEMP DESCENDING BY EMP_ID.
WRITE / 'AFTER APPENDING .........'.
PERFORM disp_emp.

DELETE ADJACENT DUPLICATES FROM it_TY_ZEMP COMPARING AL
L FIELDS.
WRITE / 'AFTER DELETING'.
```

```
PERFORM disp_emp.

READ TABLE it_TY_ZEMP INTO wa_TY_ZEMP INDEX 10.
WRITE / 'AFTER READING'.

WRITE :/20 wa_TY_ZEMP-NAME COLOR 1.

clear wa_ty_zemp.

*READ TABLE IT_TY_ZEMP INTO WA_TY_ZEMP INDEX 5.

read table it_ty_zemp into wa_ty_zemp with key EMP_ID =
'101' .

WRITE :/ ' name is' ,  wa_TY_ZEMP-NAME COLOR 1.

WA_TY_ZEMP-NAME = 'vIKAS sHRIVASTAVA'.
WA_TY_ZEMP-age = '22'.

*MODIFY IT_TY_ZEMP FROM WA_TY_ZEMP INDEX 3 TRANSPORTING
NAME AGE.
MODIFY IT_TY_ZEMP FROM WA_TY_ZEMP TRANSPORTING NAME AGE
WHERE EMP_ID = '101'.

V_LINES = LINES( IT_TY_ZEMP ).

SKIP 3.
WRITE :/ 'NO OF LINES ARE  ----> ', V_LINES.

PERFORM DISP_EMP.

SKIP 2.
WRITE 'After deletion '.
DELETE IT_TY_ZEMP index 3.
*DELETE IT_TY_ZEMP FROM 2 TO 3.
*DELETE IT_TY_ZEMP WHERE NAME = 'JAINI'.
*DELETE IT_TY_ZEMP FROM 2 TO 3 WHERE AGE = '22'.
```

```
PERFORM DISP_EMP.
form disp_emp.
LOOP AT it_ty_zemp into wa_ty_zemp.
  write :/ sy-tabix color 2 , wa_ty_zemp-emp_id color 3
, wa_ty_zemp-name color 4 ,
           wa_ty_zemp-age color 5 , wa_ty_zemp-salary c
olor 6, wa_ty_zemp-email color 7.
ENDLOOP.
endform.
```

*********** ***Example of Collect*** *********

```
REPORT  ZDEMO_INTERNAL_TABLE_Collect_EXAMPLE.

types : begin of ty_tab1,
        name type char5,
        class type int4,
        roll type int4,
     end of ty_tab1.

data it_tabl1 type table of ty_tab1.

data wa_tab1 type ty_tab1.

wa_tab1-name = 'Vikas'.
wa_tab1-class = 20.
wa_tab1-roll = 3.

collect wa_tab1 into it_tabl1 .

wa_tab1-name = 'Vik'.
wa_tab1-class = 20.
wa_tab1-roll = 3.
```

```
collect wa_tab1 into it_tabl1 .
wa_tab1-name = 'Vikas'.
wa_tab1-class = 20.
wa_tab1-roll = 30.

collect wa_tab1 into it_tabl1 .

LOOP AT it_tabl1 into wa_tab1.
 write: / wa_tab1-name, wa_tab1-class, wa_tab1-roll.
ENDLOOP.
```